

**CLAIMS**

1. A process for the expression of homologous and heterologous proteins by culturing Zygosaccharomyces bailii strains transformed with expression vectors  
5 having a gene coding for such as protein.
2. Expression vector for Z. bailii strains containing ARS sequences from S. cerevisiae, homologous CEN (centromeric) sequences or derived from S. cerevisiae, a gene coding for a protein, a promoter controlling the expression and a marker.
- 10 3. A vector according to claim 2 in which the ARS sequence is the ARS1 sequence.
4. A vector according to claim 2 or 3 where the centromeric sequence is CEN4 from S. cerevisiae.
5. A vector according to anyone of the claims 2,3,4 derived from the plasmid  
15 pSB2 of Z. bailii.
6. A vector according to claims 2,3,4,5 where the marker is the gene for resistance to geneticin
7. A vector according to claims 2-6 where the promoter is ADH1 and/or GAL<sup>1-10</sup>/CYC1 from S. cerevisiae.
- 20 8. A strain of Z. bailii transformed with a vector from claims 2-7.
9. A strain according to claim 8 derived from ATCC36947, A TCC60483 or ISA1307 strains.
10. A method of transformation of Z. bailii strains including electroporation in the presence of monovalent ions, reducing agents and/or nucleic acids.